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PERKINS COIE LLP			GODFREY, KEITH JOSEPH	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/801,950	Applicant(s) WU, HONGYU	
	Examiner Keith J. Godfrey	Art Unit 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 55-64 is/are pending in the application.
- 4a) Of the above claim(s) 21-54 and 65 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :07/28/2005, 04/11/2005, 02/28/2005, 02/07/2005, 06/28/2004, 03/15/2004.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I (claims 1-20 and 55-64) in the reply filed on 05/17/2007 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7-9, 14, 17-19, 55-57 are rejected under 35 U.S.C. 102(b) as being anticipated by Haase et al. (3904465).

As to claim 1, Haase et al. (3904465) teaches a method for embossed thermoplastic multi-layer film used for package material including: extruding a first film layer (first material) (col. 2, lines 31-40 and Fig. 1, element 11); extruding a second film layer (second material) (col. 3, lines 31-40 and Fig. 1, element 11'); fusion of the first and second films performed on the nip formed by the cooling rotating cylinder (col. 3, lines 61-67 and col. 4, lines 1-2 and Fig. 1, elements 11, 11' and 16); and embossing a pattern for a quilted design to make bags (col. 2, lines 65-67 and col. 3, lines 6-12, col. 4, lines 52-59).

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As to claim 2, Haase et al. (3904465) teaches a heat seal lines bonding superimposed films (abstract).

As to claim 3, Haase et al. (3904465) teaches a film with air encapsulated therein (col. 4, lines 5-12). It is interpreted that because the film encapsulates air it is inherent that the film is gas impermeable.

As to claim 7, Haase et al. (3904465) teaches an embossed pattern on the nip roller (cooling roller) (col. 3, lines 3-11).

As to claim 8, Haase et al. (3904465) teaches a seal roll (pressure application) fully contact the film with the embossed mask (col. 3, lines 61-67 and col. 4, lines 1-5 and Fig 1. element 19).

As to claim 9, Haase et al. (3904465) teaches a temperature regulated nip roller (cooling roller) (col. 2, lines 63-65).

As to claim 14, Haase et al. (3904465) teaches a method for embossed thermoplastic multi-layer film used for packaging material including: extruding a first film layer (first material) (col. 2, lines 31-40 and Fig. 1, element 11); extruding a second film layer (second material) (col. 3, lines 31-40 and Fig. 1, element 11'); fusion of the first and second films performed on the nip formed by the cooling rotating cylinder (col. 3, lines 61-67 and col. 4, lines 1-2 and Fig. 1, elements 11, 11' and 16); embossing a pattern for a quilted design to make bags (col. 2, lines 65-67 and col. 3, lines 6-12, col. 4, lines 52-59); forming the film into a bag by folding the quilted film and side-seal it together along a longitudinal edge thereof to make a continuous tube (col. 4, lines 52-

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62); cut to the desired bag length (sizing) (col. 4, line 62); and end-sealed (col. 4, line 63).

As to claims 17 and 18, Haase et al. (3904465) teaches bonding (side-sealing) the bag along a longitudinal edge (opposing sides) with heat (col. 4, lines 64-67 and col. 5, lines 1-5). It is interpreted that an amount of pressure will be intrinsic in the side-sealing process so as to bond the edges together as it is in the heat-sealable process of Haase et al. (3904465), thus meeting the pressure limitation of claim 18.

As to claim 19, Haase et al. (3904465) teaches a method for embossed thermoplastic multi-layer film used for packaging material including: extruding a first film layer (first material) (col. 2, lines 31-40 and Fig. 1, element 11); extruding a second film layer (second material) (col. 3, lines 31-40 and Fig. 1, element 11'); fusion of the first and second films performed on the nip formed by the cooling rotating cylinder (col. 3, lines 61-67 and col. 4, lines 1-2 and Fig. 1, elements 11, 11' and 16); embossing a pattern for a quilted design to make bags (col. 2, lines 65-67 and col. 3, lines 6-12, col. 4, lines 52-59); forming the film into a bag by folding the quilted film and side-seal it together along a longitudinal edge thereof to make a continuous tube (col. 4, lines 52-62).

As to claims 55-56, Haase et al. (3904465) teaches a method for embossed thermoplastic multi-layer film including: supplying from an in-line extrusion operation a multi-layered film onto a idler roller (col. 2, lines 32-39) and passing the layered film over a metallic drum (cooling roller) whereupon a pattern is embossed for pressing onto the film (col. 2, lines 54-67 Fig. 1, element 16).

As to claim 57, Haase et al. (3904465) teaches annular grooves are recessed into the periphery of the metallic cylinder (cooling roller) for the reception of an embossed pattern (inverse-pattern) (col. 2, lines 63-67).

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Haase et al. (3904465).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haase et al. (3904465), as applied in claim 1-3 above, and in view of Marzolf (US 3908070).

The teachings of Haase et al. (3904465) are discussed in the 102(b) rejections of claims 1-3 above but do not teach a bonding material between the film layers.

As to claim 4, Marzolf (US 3908070) teaches a multilayered thermoplastic film formed by coextrusion including applying an adhesive layer between the inner-barrier layer and outer rigid (structural layer/second layer) (abstract and col. 4, lines 58-67 and col. 5, lines 14-17). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an adhesive layer between the film layers, as taught by Marzolf (US 3908070), in the method of Haase et al. (3904465)

because an applied adhesive provides better adhesion between juxtaposed layers. Because both of the references are concerned with a similar technical field, namely that of manufacturing multi-layered films, one would have a reasonable expectation of success from the combination.

As to claim 5, Haase et al. (3904465) does not teach a multi-layered film including an adhesively bonded structural layer.

Marzolf (US 3908070) teaches a multilayer film including an outer rigid olefin layer (structural layer/ second layer) adhered to a nylon layer further adhered to a barrier layer (first layer) (col. 4, lines 65-67 and col. 5, lines 1-17; 40-61). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a structural layer on the outside of the film, as taught by Marzolf (US 3908070) in the method of Haase et al. (3904465) because a structural layer helps the film retain shape and add protection.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haase et al. (3904465), as applied above in claims 1-3, 7-9, 14, 17-19, 55-57 above, in view of Marzolf (US 3908070) and in further view of Mak (US 6799680).

As to claims 6, the teachings of Haase et al. (3904465) are discussed above in the 102(b) rejection of claims 1-3, 7-9, 14, 17-19, 55-57 above but do not teach applying a pattern to all layers of the multi-layered film.

Mak (US 6799680) teaches a composite material (multi-layer film) embossed (application of pattern) by a die to form the channels (pattern) on all layers of the

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layered structure (film) (Figs. 7 and 8 and col. 5, lines 32-47). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include embossing all layers of the composite (multi-layered) structure (film), as taught by Mak (US 6799680), in the method of Haase et al. (3904465) in view of Marzolf (US 3908070) because the plurality of layers in the channels support the channels upon evacuation of air. Because both of the references are concerned with a similar technical field, namely that of thermoplastic film sealed containers, one would have a reasonable expectation of success from the combination.

Claims 12-13, 15-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haase et al. (3904465), as applied above in claims 1-3, 7-9, 14, 17-19, 55-57 above, in view of Mak (US 6799680).

As to claim 16, the teachings of Haase et al. (3904465) are discussed above in the 102(b) rejection of claims 1-3, 7-9, 14, 17-19, 55-57 above but do not teach applying a pattern to all layers of the multi-layered film.

Mak (US 6799680) teaches a composite material (multi-layer film) embossed (application of pattern) by a die to form the channels (pattern) on all layers of the layered structure (film) (Figs. 7 and 8 and col. 5, lines 32-47). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include embossing all layers of the composite (multi-layered) structure (film), as taught by Mak (US 6799680), in the method of Haase et al. (3904465) because the plurality of layers in the channels support the channels upon evacuation of air. Because both of

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the references are concerned with a similar technical field, namely that of thermoplastic film sealed containers, one would have a reasonable expectation of success from the combination.

As to claims 12-13, 15, and 20, the teachings of Haase et al. (3904465) are discussed in the 102(b) rejections of claims 1-3 above but do not teach a zigzag pattern having channels of varying width.

Mak (US 6799680) teaches a vacuum sealed container including channels on the sides of the container forming an interconnecting network and allow a flow of air for evacuation of the bag (abstract), specifically, a zigzag pattern having an alternating width (Fig. 18a). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a varying width zigzag channels formed by the pattern, as taught by Mak (US 6799680), in the method of Haase et al. (3904465) because such pattern has the advantage that more of the surface area will be connected with the vacuum source (Mak (US 6799680) col. 8, lines 60-67).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haase et al. (3904465), as applied in claims 1-3, 7-9, 14, 17-19, 55-57 above, in view of Bergevin et al. (US 2003/0070751 A1).

The teachings of Haase et al. (3904465) are discussed above in the 102(b) rejection of claims 1-3, 7-9, 14, 17-19, 55-57 above but do not teach the use of a patterned cooling plank.

As to claim 10, Bergevin et al. (US 2003/0070751 A1) teaches a method of manufacturing polymeric tubes including the use of a grooved cooling plates (patterned cooling planks) (paragraph [0044] and Fig. 5A, element 48). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the use of grooved cooling plates (patterned cooling planks), as taught by Bergevin et al. (US 2003/0070751 A1), in the method of Haase et al. (3904465) because the resulting structure obtains fewer wrinkles (Bergevin et al. (US 2003/0070751 A1) paragraph [0075]). Because both of the references are concerned with a similar technical field, namely that of polymeric structures, one would have a reasonable expectation of success from the combination.

As to claim 11, Bergevin et al. (US 2003/0070751 A1) teaches controlling the cooling plates (cooling planks) by circulating cold water supplied by a chiller system (paragraph [0044]). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made use a chiller system of circulating cold water to control cooling plate (cooling planks) as taught Bergevin et al. (US 2003/0070751 A1), in the method of Haase et al. (3904465) because the resulting structure obtains fewer wrinkles (Bergevin et al. (US 2003/0070751 A1) paragraph [0075]).

Claims 58-59 rejected under 35 U.S.C. 103(a) as being unpatentable over Haase et al. (3904465) in view of Bergevin et al. (US 2003/0070751 A1).

As to claims 58-59, Haase et al. (3904465) teaches a method for embossed thermoplastic multi-layer film including: supplying from an in-line extrusion operation a multi-layered film onto a idler roller (col. 2, lines 32-39).

Haase et al. (3904465) does not teach using a patterned cooling plank.

Bergevin et al. (US 2003/0070751 A1) teaches a method of manufacturing polymeric tubes including the use of grooved cooling plates (inverse-patterned cooling planks) (paragraph [0044]). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the grooved cooling plates (inverse-patterned cooling planks), as taught by Bergevin et al. (US 2003/0070751 A1), in the method of Haase et al. (3904465) because the resulting structure obtains fewer wrinkles (Bergevin et al. (US 2003/0070751 A1) paragraph [0075]). Because both of the references are concerned with a similar technical field, namely that of polymeric structures, one would have a reasonable expectation of success from the combination.

Claims 60-64 rejected under 35 U.S.C. 103(a) as being unpatentable over Haase et al. (3904465) in view of Cancio et al. (US 4626574).

As to claims 60-63, Haase et al. (3904465) teaches a method for embossed thermoplastic multi-layer film including: supplying from an in-line extrusion operation a multi-layered film onto a idler roller (col. 2, lines 32-39).

Haase et al. (3904465) does not teach an air-knife.

Cancio et al. (US 4626574) teaches a method of producing a polyethylene film by extrusion including the use of an air-knife and embossing the film impressing a pattern

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thereon (col. 6, lines 64-67 and col. 7, lines 1-9). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Haase et al. (3904465) to include the use of air-knife to impress a pattern thereon, as taught by Cancio et al. (US 4626574), because an air-knife produces a more uniform strain for embossing the pattern. Because both of the references are concerned with a similar technical field, namely that of polymeric films, one would have a reasonable expectation of success from the combination.

Further as to claims 61 and 63, it is interpreted that an inverse-vacuum is effectively a positive flow of air and as such is equivalent to an air-knife. Thus no further limiting weight is applied to the inverse-vacuum than the air-knife.

As to claim 64, Cancio et al. (US 4626574) teaches a single extruder (col. 7, lines 11-18). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made it modify the method of Haase et al. (3904465) to include a single extruder, as taught by Cancio et al. (US 4626574), because a single extruder is preferred when making a single layered film.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith J. Godfrey whose telephone number is 571-272-6391. The examiner can normally be reached on 8:00-5:00 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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SUPERVISORY PATENT EXAMINER

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